

3. The peristaltic pump according to claim 2, wherein the actuator, the spring, and the plunger are configured to discharge the spring when the actuator mechanically disengages from the plunger.

4. The peristaltic pump according to claim 2, wherein the actuator is configured to mechanically disengage from the plunger to thereby discharge the spring to bias the plunger against the tube.

5. The peristaltic pump according to claim 1, wherein movement of the actuator does not correspond to movement of the plunger when the actuator mechanically disengages from the plunger.

6. The peristaltic pump according to claim 1, wherein the actuator is configured to not contribute to a force of the plunger against the tube.

7. The peristaltic pump according to claim 1, wherein the actuator is configured to mechanically engage the plunger to lift the plunger away from the tube and mechanically disengage the plunger to allow the spring to generate a force from the plunger against the tube.

8. The peristaltic pump according to claim 1, wherein the peristaltic pump is configured such that a force of the plunger applied to the tube by the plunger is produced by the spring and not the actuator.

9. The peristaltic pump according to claim 1, further comprising an inlet valve and an outlet valve, wherein the peristaltic pump is configured to:

- close the inlet valve and the outlet valve;
- allow the spring to fully bias the plunger against the tube;
- determine the first position of the plunger;
- open the outlet valve;
- move the plunger away from the tube against the bias of the spring;
- determine a second position of the plunger; and
- estimate a volume of fluid flow using the first position and the second position.

10. The peristaltic pump according to claim 1, further comprising an actuator sensor operatively coupled to the actuator and configured to determine movement of the actuator.

11. A method for pumping, comprising:

- moving a plunger toward a tube;
- fully biasing the plunger against the tube where an actuator does not contribute any force of the plunger against the tube;
- sensing a first position of the plunger;

moving the plunger away from the tube and counter to the bias;

sensing a second position of the plunger; and
estimating fluid flow within the tube using the first position and the second position.

12. The method according to claim 11, wherein the actuator and the plunger are configured to charge a spring when the actuator moves the plunger away from the tube.

13. The method according to claim 12, wherein the actuator and the plunger are configured to discharge the spring when the actuator mechanically disengages from the plunger.

14. The method according to claim 12, wherein the actuator is configured to mechanically disengage from the plunger to thereby discharge the spring to bias the plunger against the tube.

15. The method according to claim 11, wherein movement of the actuator does not correspond to movement of the plunger when the actuator mechanically disengages from the plunger.

16. The method according to claim 11, wherein the actuator is configured to not contribute to a force of the plunger against the tube.

17. The method according to claim 11, wherein the actuator is configured to mechanically engage the plunger to lift the plunger away from the tube and mechanically disengage the plunger to allow a spring to generate a force from the plunger against the tube.

18. The method according to claim 11, wherein a force of the plunger applied against the tube is produced by a spring and not the actuator.

19. The method according to claim 11, further comprising:

- closing an inlet valve and an outlet valve;
- allowing a spring to fully bias the plunger against the tube when determining the first position of the plunger;
- opening the outlet valve;
- moving the plunger away from the tube against the bias of the spring when determining the second position of the plunger; and
- estimating a volume of fluid flow using the first position and the second position.

20. The method according to claim 11, further comprising determining movement of the actuator.

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